

## REMARKS

### *Phone Interview*

A phone interview took place on the August 3<sup>rd</sup> 2005 between Examiner Bharat Barot and undersigned Ron Jacobs discussing *Gerace* (U.S. Patent No. 5,991,735) in light of the independent claims 1 and 32. A conclusion was reached that *Gerace* is different from the independent claims 1 and 32 and is in fact not anticipating, teaching or suggesting the combination of elements in independent claims 1 and 32. Specifically, *Gerace* does not teach or suggest the combination of elements as listed in independent claims 1 and 32:

- estimating parameters of a learning machine, wherein the parameters define a User Model specific to the user and wherein the parameters are estimated in part from the user-specific data files (*independent claim elements 1(c) and 32(c)*)
- analyzing a document  $d$  to identify properties of the document (*independent claim elements 1(d) and 32(d)*)
- estimating a probability  $P(u|d)$  that an unseen document  $d$  is of interest to the user  $u$ , wherein the probability  $P(u|d)$  is estimated by applying the identified properties of the document to the learning machine having the parameters defined by the User Model (*independent claim elements 1(e) and 32(e)*) and
- using the estimated probability to provide automatic, personalized information services to the user (*independent claim elements 1(f) and 32(f)*).

*Claims Rejections, 35 USC Paragraph 102(e)*

Claims 1-15, 20, 22, 22-24, 27-46, 51, 53-55 and 58-62 were rejected under U.S.C. 102(e) as being anticipated by *Gerace* (U.S. Patent No. 5,991,735).

In reply, the Applicant respectfully disagrees.

*Gerace* teaches:

(*Abstract*) “Based on regression analysis of recorded responses of a first set of users viewing the advertisements, the target user profile is refined.” [underline and bold by Applicant]

(*Column 2, lines 19-20*) “...a history and/or pattern of user activity which in turn is interpreted as a user’s habit and /or preferences.” [underline and bold by Applicant]

(*Column 2, line 45*) “that records history of users viewing the advertisements.” [underline and bold by Applicant]

(*Column 2, lines 50-53*) “... performs a regression analysis on the recorded history of users viewing the ads. The subroutine refines profiles of target users based on the regression analysis.” [underline and bold by Applicant]

(*Claim 8*) “... records history of users viewing the advertisements ...”. [underline and bold by Applicant]

(*Claim 9*) “... regression analysis on the history of users viewing the advertisements ...”. [underline and bold by Applicant]

As a person of average skill in the art readily appreciates, in particular reading the above referenced sections, *Gerace* uses memorization to determine a profile of a user. *Gerace* does not teach nor suggest generalization beyond the recorded history or memorized information. Furthermore, *Gerace*’s user interest is defined in a fixed set of categories

(also referred to as a gate information, e.g. sports) and does not extend beyond the fixed set of categories (e.g. stocks instead of sports). *Gerace*'s teaching is concerned with finding similar user(s), among the existing set of users with a fixed set of categories. By having a set of users that clicked or viewed an Ad that was served to them *Gerace* finds similar users (i.e. user(s) that like similar categories within the fixed set of categories) to serve them that Ad. If the AD or document belongs to a category X that is not listed or not part of the set of existing users, then *Gerace*'s system has to present this Ad or unseen document to a random set of users until sufficient statistics about the users that like this has emerged. In other words, it is not taught nor is it suggested how the first set of users or the first user are/is presented with an unseen document or an unseen Ad. *Gerace* has no answer to that problem!

Accordingly, it is noted that *Gerace* does not and can not estimate posterior probability  $P(u|d)$  that an unseen document is of interest to a user (See *independent claim elements 1(e) and 32(e)*).

Estimating the posterior probability  $P(u|d)$  that an unseen document is of interest to a user (See *independent claim elements 1(e) and 32(e)*) is just one of the elements of the claimed invention of the present application. In that light, it is noted that the way the claimed invention establishes the posterior probability  $P(u|d)$  of an unseen document is not taught nor suggested by the prior art of record. More specifically, the prior art of record does not teach or suggest a learning machine assisting in estimating  $P(u|d)$  that an unseen document is of interest to user  $d$  (*independent claim elements 1(e) and 32(e)*).

Furthermore, the prior art of record does not teach or suggest the step of estimating parameters of that learning machine and further assisting in estimating P(u|d) that an unseen document is of interest to user d. (*independent claim elements 1(c) and 32(c)*).

In summary, the Applicant submits that claims 1-15, 20, 22, 22-24, 27-46, 51, 53-55 and 58-62 are not anticipated and not suggested by *Gerace*. It is kindly requested that the claimed invention is interpreted as the combination of elements listed in each independent claim, i.e., 1(a)-1(f) and 32(a)-32(f). Accordingly, allowance of claims 1-15, 20, 22, 22-24, 27-46, 51, 53-55 and 58-62 is kindly requested.

***Claims Rejections, 35 USC Paragraph 103***

Claims 16-18, 47-49 were rejected under U.S.C. 103 as being unpatentable over *Gerace* (U.S. Patent No. 5,991,735).

In reply, the Applicant respectfully disagrees for the above mentioned reasons and arguments. The Applicant submits that claims 16-18, 47-49 are not suggested by *Gerace*. Accordingly, allowance of claims 16-18, 47-49 is kindly requested.

***Claims Objections (Allowable Subject Matter)***

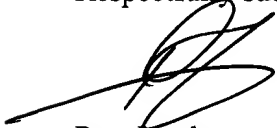
Claims 19, 21, 25-26, 50, 52 and 56-57 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In reply, the Applicant appreciates and thanks the Examiner for indicating allowable subject matter.

## CONCLUSION

The Applicant submits that claims 1-62 are novel and unobvious over *Gerace*. In general, the Applicant submits that claims 1-62 are novel and unobvious over the prior art of record. In that light, the Applicant incorporates in this reply all previously made arguments and remarks addressing the prior art of record. Accordingly, allowance of the claims now in the application is kindly requested.

Respectfully submitted,



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